

## EFFECTS OF EXTENSION EDUCATION ON TOMATO PRODUCTION TECHNOLOGIES IN SURULERE LOCAL GOVERNMENT AREA OF OYO STATE, NIGERIA

J. O OYETORO<sup>1</sup>, S. I ADETUNBI<sup>2</sup> & I. O AJUWON<sup>3</sup>

<sup>1,2</sup>Department of Agricultural Extension and Rural Development, Ladoke Akintola University of Technology,  
Ogbomosho, Nigeria

<sup>3</sup>Department of Agricultural Extension and Management, Oyo State College of Agriculture, Igbo-Ora, Oyo State, Nigeria

### ABSTRACT

The importance of balance diet to normal life physiological functioning cannot be over emphasized, tomato is one of the sources that provide vitamin and minerals and this is being spiced up by the inclusion of tomato in our diet. The research work assessed the effect of extension education on tomato production technologies in Surulere Local Government Area of Oyo State, Nigeria. It was designed to examine information obtained on tomato production through extension education and problems encountered in tomato production. Structured interview schedule was used to collect data from 70 respondents. Percentages and frequency count and Pearson Product Moment Correlation were used to analyze the data. The study revealed that most of the respondents (45.7%) received information on harvesting of tomato. The least information received through extension education was on marketing of tomato as claimed by only 4.3% of the respondents. Also, (51.4%) of the respondents claimed market surplus as a severe problem affecting the production of tomato in the area. In addition, significant relationship existed between selected socio economic characteristics of respondents such as education qualification ( $r = 0.391$ ,  $p = 0.003$ ) and farm size ( $r = 0.622$ ,  $p = 0.000$ ) and annual income earned from tomato production. The study therefore recommended that extension education on tomato production should put more emphasis on market opportunities for optimal income.

**KEYWORDS:** Extension, Extension Education, Tomato Production, Tomato Farmers

### INTRODUCTION

Tomato (*Lycopersicon esculentum*) is a staple fruit vegetable. Nutritionists are of the opinion that fresh fruits and vegetables are very important sources of vitamins and minerals that are essential for healthy human diet. Tomato has become an important cash and industrial crop in many parts of the world. In Nigeria, an annual total area of one million hectares is reportedly used for its cultivation while it makes up about 18 per cent of the average daily consumption of vegetables in Nigeria homes. Tomato may be eaten fresh as salad or they may be pressed into pastes or purees, which are used for cooking in soups or stews and producing fruit drinks. It can also be processed into juice or ketchup. Tomato is grown in many parts of Nigeria both as wet and dry season crops. Although most tomato production is on a small scale in backyard gardens, it is grown in commercial quantities in many states in the North, particularly Kano, Borno, Sokoto, Gombe, Yobe, Kaduna, Benue and many others (Aja, 2012).

Oba (2013) reported that the Central Bank of Nigeria (CBN) recently expressed dismay over the N117bn spent yearly by the Federal government on the importation of processed tomato paste, stressing that such a colossal sum of monies could better be used to grow the commodity locally. The simple reason for this ugly trend was largely due to the

dysfunctional agricultural value chain system in Nigeria, resulting in about 50 per cent of the tomato produced in the country being lost to lack of preservation, poor marketing distribution and access to markets. Optimum production of tomato requires intensive management practices that conserve soil nutrient needed for maintaining land and water quality for sustaining tomato production (Yaffa *et al*, 2000).

Extension serves as information bank in agricultural production. It is very essential in perishable crop production such as tomato. It targets at changing the knowledge, skill and attitude of the clientele. Oakley and Garforth (1997) described extension as a dynamic concept in the sense that the interpretation of it is always changing. Extension, therefore, is not a term which can be precisely defined, but one which describes a continual and changing process in rural areas. Extension is an informal educational process directed toward the rural population. This process offers advice and information to help them solve their problems. Extension also aims to increase the efficiency of the family farm, increase production and generally increase the standard of living of the farm family. The objective of extension is to change farmers' outlook toward their difficulties. Extension is concerned not just with physical and economic achievements but also with the development of the rural people themselves. Extension agents, therefore, discuss matters with the rural people, help them to gain a clearer insight into their problems and also to decide how to overcome these problems. Extension therefore is an educational process which works with rural people, supports them and prepares them to confront their problems more successfully. Extension education is an education for the betterment of people and for changing their behavior that is knowledge, skill and attitude (My Agriculture Information bank, 2011).

According to Central Bank of Nigeria (CBN) as reported by Agbota (2013), the nation still imports 65,809 tonnes of processed tomato worth N11.7 billion annually. This was as a result of dysfunctional agricultural value chain system culminating to about 50 percent of the nation's local produce being lost during harvest. The problems of tomato production in the country include high cost of production during the irrigation period and post-harvest losses due to lack of storage facilities. Farmers consider farming tomato as a "curse" because they are forced to sell to the marketers at very low prices since they cannot keep the product for long. The marketers are the ones who now sell it at higher prices, thus making huge profit at the expense of the farmers. Arise from the stated problems, the study therefore examined information obtained on tomato production through extension education and problems encountered in tomato production.

## **MATERIALS AND METHODS**

The study was carried out in Surulere Local Government area of Oyo State, the area was carved out of the former Ogbomoso Local Government area on the 11<sup>th</sup> May 1989 with Iresa-Adu as the headquarters. It shares boundaries with Ifelodun and Orolu Local government Area of Osun State, Asa Local Government Area in Kwara state and Ogbomoso South Local Government of Oyo State. The major income generating activity of the people is Agriculture; some were civil servant, while others engaged in non-agricultural activities such as artisan in combination with farming. Food crops grown in the study areas include tomato, maize, cassava, yam, soybean and groundnut.

Sampling procedure involved random selection of 12 respondents from six villages of farmers producing tomato, given a sample size of 72 respondents. However, two interview schedules were not suitable for analysis thereby reducing sample size to 70 respondents. The dependent variable is the income realized from tomato production and it was measured by asking the respondents the amount (in naira) realized from tomato sale while the independent variable is the socio-economic characteristics of the respondents such as age, sex, marital status and so on.

The descriptive statistical tool used for the data analysis was percentages and frequency count and the inferential statistical tool used to establish the relationship between selected variables was Pearson Product Moment Correlation (PPMC).

## RESULTS AND DISCUSSIONS

### Information Obtained on Tomato Production Technologies through Extension Education

Table 1 shows that most of the respondents (45.7%) received information on harvesting of tomato, this is followed by 30% of the respondents claimed they received information on nursery preparation. This means that respondents in the study area received extension information on various management practices on tomato production but highly on harvesting of tomato. This is crucial due to perishability nature of tomato fruits. The least information received was on marketing of tomato. This means that more information is needed on tomato marketing and this can pose serious threat to tomato farming in the study area since the success of any enterprise rests on its marketability of the commodity.

### Annual Income from Tomato Production

Table 2 shows that majority (78.6%) of the respondents claimed annual income between of ₦20,000-100,000 while only (1.4%) realized annual income between ₦601,000-900,000. This result indicated that most of the tomato farmers realized low income. This calls for urgent attention by the entire stake holder in agriculture to enhance tomato farmers' access to production input like fertilizer, pesticides, credit facilities, as well as adequate extension services to enhance production.

### Problems Encountered in Tomato Production

Table 3 shows that some of the respondents (48.6%) claimed severe problem of pest and diseases in tomato production. This means that pest and diseases affected tomato production in the study area. In addition, almost half (51.4%) of the respondents claimed market surplus as a severe problem militating against the production of tomato in the study area. This finding corroborated the report of Agbota, (2013) that farmers consider farming tomato as a "curse" because they are forced to sell to the marketers at very low prices since they cannot keep the product for long.

### Correlation Analysis of the Relationship between Annual Incomes Earned From Tomato Production and Their Socio-Economic Characteristics

Table 4: Shows that significant relationship existed between selected socio economic characteristics of tomato farmers such as education qualification ( $r = 0.391$ ,  $p = 0.003$ ), farm size ( $r = 0.622$ ,  $p = 0.000$ ) and annual income earned from tomato production. This implies that the higher their education qualification, the more their acquired skill and knowledge to be used in tomato production, hence the higher their income earned from tomato production. Also, as their farm size increases, their income also increases.

## CONCLUSIONS

Based on the findings of this study, it can be concluded that extension education has gone a long way in disseminating management practices in tomato production especially on harvesting and nursery practices yet farmers still had low income from sale of tomato in the study area. It is therefore recommended that extension education on tomato production should put more emphasis on market opportunities and probably storage and preservation techniques for optimal income.

**Table 1: Distribution of Respondents According to Information Obtained on Tomato Production Technologies through Extension Education**

*Information	Frequency	Percentage
Land clearing	10	14.3
Nursery	21	30.0
Transplanting	11	15.7
Weeding	4	5.7
Fertilizer application	18	25.7
Harvesting	32	45.7
Marketing	3	4.3
Preservation	710.0	

Source: Field survey, 2013.

\* Multiple responses

**Table 2: Distribution of Respondent According to Annual Income**

Annual Income (₦)	Frequency	Percentage
20,000-100,000	55	78.6
101,000-300,000	8	11.4
301,000-600,000	6	8.6
601,000-900,000	1	1.4

Source: Field Survey, 2013.

**Table 3: Distribution of Respondents According to Problems Encountered on Tomato Production**

Problem	Severe	Mild	Not a Problem
Pest and disease	34(48.6)	14(20.0)	22(31.4)
Market surplus	36(51.4)	32(45.7)	2(2.9)

**Table 4: Correlation Analysis of the Relationship between Annual Incomes Generated from Tomato Production and Their Socio-Economic Characteristics**

Variables Correlation	Coefficient (r)	p-Value	Remarks
Sex	0.147	0.224	insignificant
Age	-0.178	0.139	Insignificant
Marital status	0.077	0.528	Insignificant
Qualification	0.391	0.003	Significant
Religion	0.034	0.777	Insignificant
Household size	0.064	0.596	Insignificant
Farm size	0.622	0.000	significant

Source: Field Survey, 2013.

\* Correlation is significant at the 1% level (2 tailed).

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